

SCIENCE ADVISORY BOARD

Jane Lubchenco, Ph.D.

Under Secretary of Commerce for Oceans & Atmosphere
NOAA Administrator

National Oceanic and Atmospheric Administration

November 14, 2012



THANK YOU

SAB AGENDA & CCOMPLISHMENTS

Report on the Cooperative Institute for North Atlantic Research

Review of the Ocean Exploration Program

Portfolio Review Task Force

EISWG's Terms of Reference

National Sea Grant Advisory Board Annual Report

Climate Working Group



NOAA LEADERSHIP CHANGES



**Rear Admiral
Michael S. Devany**
Director, Office of
Marine &
Aviation Operations &
NOAA Corps



**Amanda
Hallberg**
Acting Director of
Legislative Affairs



**Rear Admiral
David A. Score**
Deputy Director for
Operations & the
NOAA Corps



Maryjean Buhler
Chief Financial Officer

Seeking CPO Director
Dr. Rick Rosen (A)

RECENT ACCOMPLISHMENTS

- Hurricane Sandy
- GoM Disaster Response Center & NCWCP
- Draft National Climate Assessment
- Fisheries of the U.S. 2011
- Fisheries Disasters
- NOAA Habitat Blueprint

Note: The cone contains the probable path of the storm center but does not show



NOAA HABITAT BLUEPRINT
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

A framework to improve habitat for fisheries, marine life, and coastal communities

Home
Fact Sheets
Healthy Habitat Objective
Regional Habitat Initiatives
Frequently Asked Questions
Habitat Blueprint Intranet (NOAA only)
NOAA Habitat—Beyond the Blueprint
Feature Stories

Test Your Habitat IQ
www.habitat.noaa.gov

NOAA Habitat
NOAAHabitat

NOAAHabitat: We're accepting nominations for the 2012 Nancy Foster Habitat Conservation Awards. Nominations due January 18, 2013. 1.usa.gov/2mQV3Z
2 hours ago · reply · retweet · favorite

NOAAHabitat: For Restore America's Estuaries view on the right way to respond to Hurricane Sandy. washingtonpost.com/opinion/2013/01/08/restore-america-estuar...
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PacificCouncil Volunteer

WHY DO WE NEED THE NOAA HABITAT BLUEPRINT?
Protecting our natural infrastructure—our global life support systems—is vital to protecting our communities and their economies as well as fisheries and recreational opportunities along our coasts. With continued widespread loss and deterioration of coastal and marine habitats, we are in danger of losing this infrastructure. Congress has charged the National Oceanic and Atmospheric Administration (NOAA) with protecting habitat for fish, threatened and endangered species, marine mammals, and other natural resources within the coastal zone.

Now that we are turning the corner on ending overfishing, we need to increase the sustainability and productivity of our fisheries by focusing on the habitat that fish need to spawn and grow, as well as protecting the coastal resources on which our communities depend. Recognizing the need for more concerted efforts to conserve (protect and restore) habitat, we developed the NOAA Habitat Blueprint to build on existing programs, prioritize our activities, and guide our future actions. Simply put—we are improving the way we do business.

"As we end overfishing and rebuild stocks, we must look forward to ensure healthy habitats support sustainable fisheries, protected resources, and coastal economies. The Habitat Blueprint provides a basis for NOAA to advance the understanding of habitat's contribution to ecosystems and to integrate habitat science and conservation into our management efforts."

Eric C. Schwaab, Assistant Administrator for NOAA Fisheries,
Performing the duties and functions of the Assistant Secretary of Conservation and Management/Deputy Administrator



National Marine Fisheries Service
Eric C. Schwaab
Assistant Administrator for Fisheries

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RETROSPECTIVE

Integrating Framework

Next Generation Strategic Plan

1. Climate Science, Services, Adaptation
2. Weather Ready Nation
3. Healthy Oceans
4. Resilient Coastal Communities

***Sine Qua Non:* Strong Science**

**SCIENTIFIC
INTEGRITY
POLICY**

**AAAS
FELLOWS**

**DOUBLE #
SENIOR SCIENCE
POSITIONS**

**CHIEF
SCIENTIST
POSITION**

**SAB R&D
PORTFOLIO
ANALYSIS**

RESEARCH PRIORITIES

FOCUS ON

USE-INSPIRED SCIENCE



SCIENTIFIC LEADERSHIP

**OCEAN
ACIDIFICATION**

GLOBAL CHANGE RESEARCH

CLIMATE ADAPTATION

ARCTIC RESEARCH

ECOSYSTEM-BASED MANAGEMENT

STEWARDSHIP



NATIONAL OCEAN POLICY

STEWARDSHIP: ENDING OVERFISHING

U.S EEZ

catch limits and accountability measures

catch shares, recreational fishing,

HIGH SEAS: pirate fishing, RFMOs



SERVICES

EXTREME WEATHER & CLIMATE

2011: 14 >\$1 Billion-Dollar Disasters



Three more in 2011 approaching \$1B

1. Late-October Northeast winter storm
2. April 19-20 Midwest and Southeast tornadoes
3. August 18-21 Midwest and East high wind & hail



JOINT POLAR SATELLITE SYSTEM



EDUCATION

B-WET & ENVIRONMENTAL LITERACY GRANTS



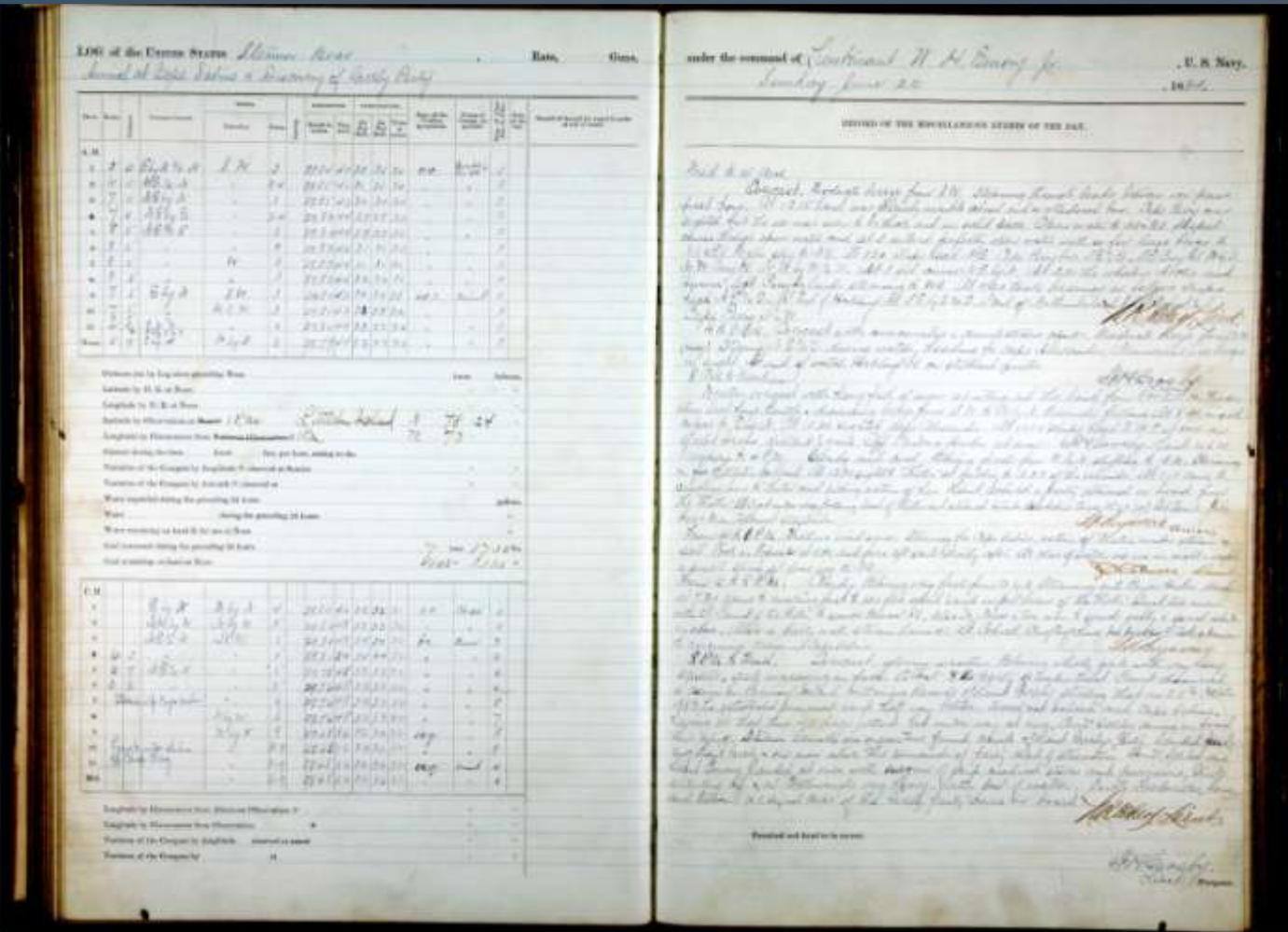
B-WET: 59 projects to receive \$5.5M to support activities:

- ☑ PacNW data driven field investigations for storm water management studies
- ☑ Great Lakes invasive species



Environmental Literacy grants: \$4.5 to support 6 multi-year projects enhancing science education activities in classrooms, aquariums, museums, and other U.S. institutions

CLIMATE OLD WEATHER CITIZEN SCIENCE PROJECT



Ship logs, preserved by NARA, are from U.S. Navy, Coast Guard & Revenue Cutter voyages in the Arctic between 1850 & the World War II era

An aerial photograph capturing the Deepwater Horizon oil rig engulfed in a massive fire. A thick, dark plume of smoke billows upwards from the center of the inferno. Several fireboats are positioned around the rig, directing high-pressure jets of water onto the burning structure. The surrounding ocean is a deep blue, and the sky is a pale, hazy blue. The overall scene is one of a major industrial disaster.

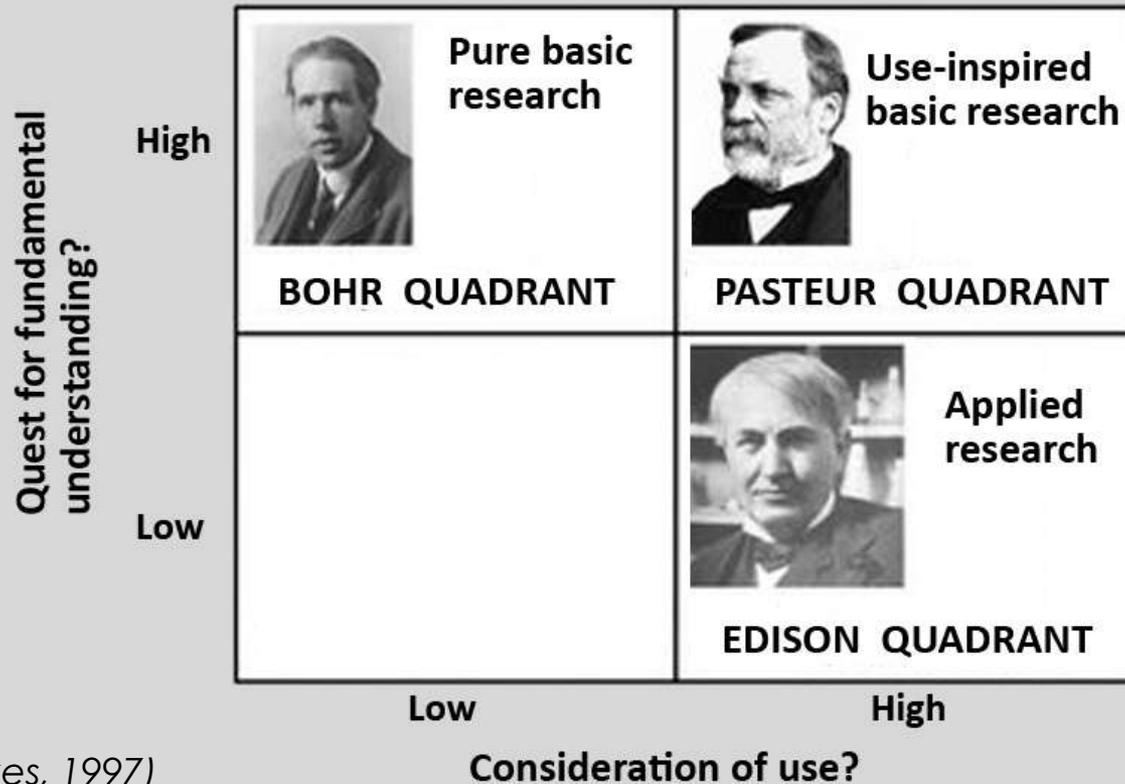
DEEPWATER HORIZON



JAPANESE TSUNAMI

PROSPECTIVE

PASTEUR'S QUADRANT



(Stokes, 1997)

USE-INSPIRED RESEARCH: to pursue fundamental understanding but motivated by a question of use



CUTTING-EDGE, USE-INSPIRED SCIENCE

- **Climate change & adaptation**
- **Extreme weather & water events**
- **Healthy oceans**
- **Sustainable fisheries**
- **Resilient coastal habitats**

**RESILIENT ECOSYSTEMS · RESILIENT COMMUNITIES
RESILIENT ECONOMIES**

MAPPING & CHARTING



ARCTIC

ARCTIC VISION & STRATEGY



NOAA National Weather Service Joplin Tornado Path of Destruction

Sunday May 22, 2011, an EF5 tornado with multiple vortex tore through Joplin, MO with 200 mph winds, leaving almost 160 people dead. The tornado is the deadliest since modern record keeping began.



St. John's Regional Medial Center before May 22nd.

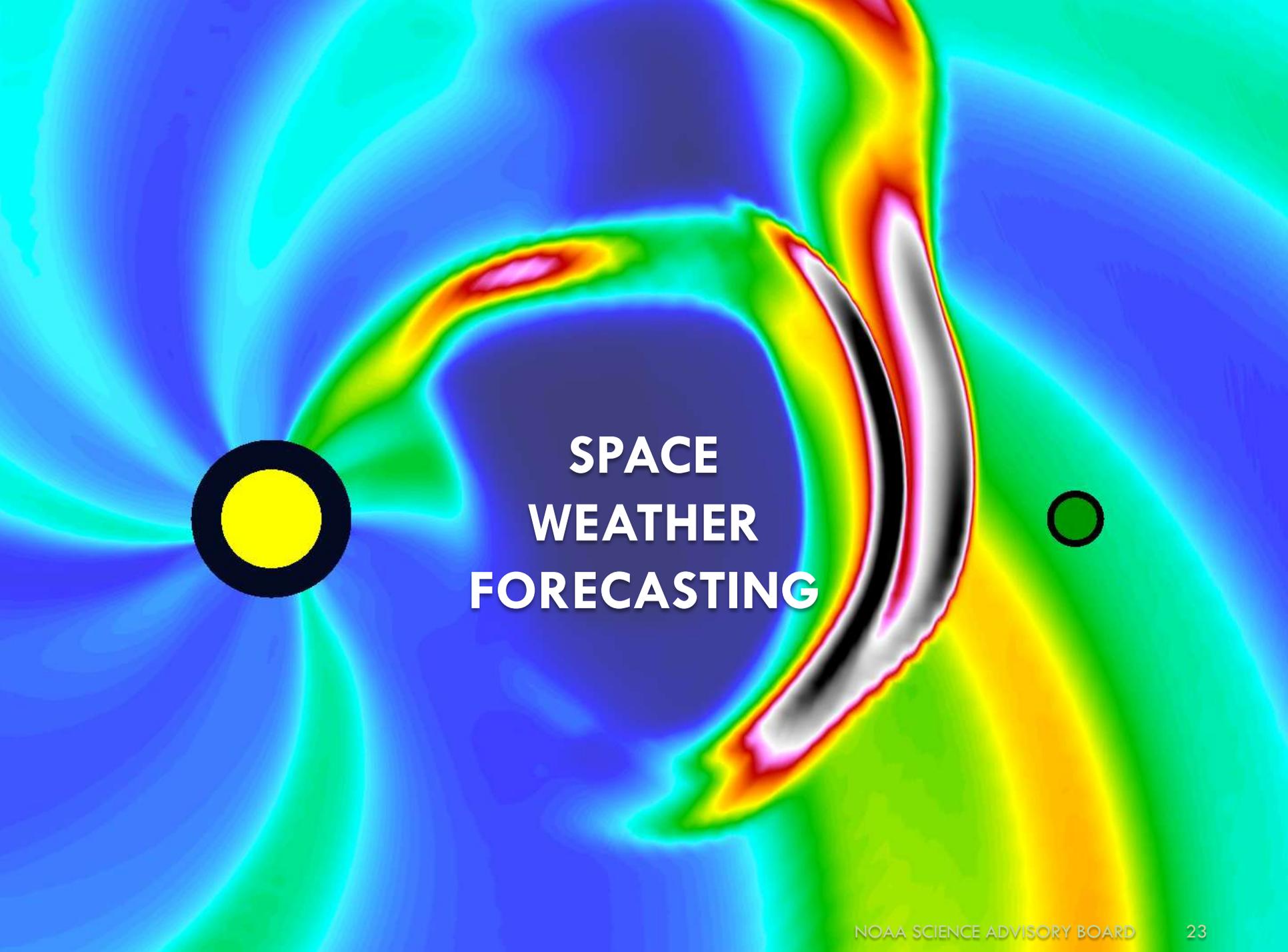


St. John's Regional Medial Center after May 22nd.



EXTREME WEATHER/CLIMATE



A vibrant, multi-colored visualization of space weather, likely a coronagraph image of the solar corona. The image shows a bright yellow sun on the left, with a black ring around it. A large, curved, multi-colored structure (the solar corona) extends from the sun towards the right. The colors range from blue and cyan to green, yellow, orange, and red, indicating different temperatures and densities. A black ring is also visible on the right side of the image.

SPACE WEATHER FORECASTING

SCIENCE ADVISORY BOARD

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BACKUP MATERIAL



ANNUAL GUIDANCE MEMORANDUM

Budget uncertainty constrains NOAA's mission and critical responsibilities

Focus on near-term execution imperatives

1. Evolve NOAA's weather services to become more effective, efficient, and agile
2. Cost-effectively sustain NOAA's operational satellite capabilities
3. Re-engineer a sustainable suite of NOAA's core infrastructure (e.g., facilities, IT, observation platforms)

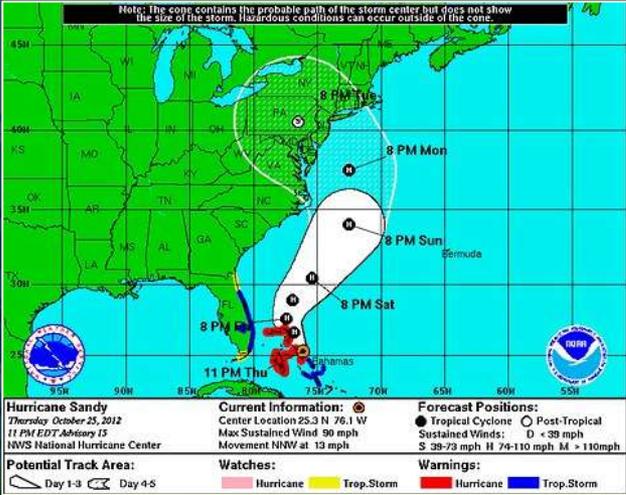
Focus Areas for Planning

- ☑ Strengthen the production and delivery of climate information and services
- ☑ Habitat efforts in priority areas and demonstrating landscape-scale results
- ☑ Advance NOAA's data integration and services to supporting resilient coastal communities and economies
- ☑ Improve the methodologies to assess and manage fish stocks and protected resources
- ☑ Enhance research and modeling to advance NOAA's mission



WEATHER & SATELLITES

HURRICANE SANDY & WEATHER READY NATION



Hurricane Sandy Forecast Track, GOES-13 Imagery, & WP-3D Flight



Celebrating Year 1 of Weather Ready Nation



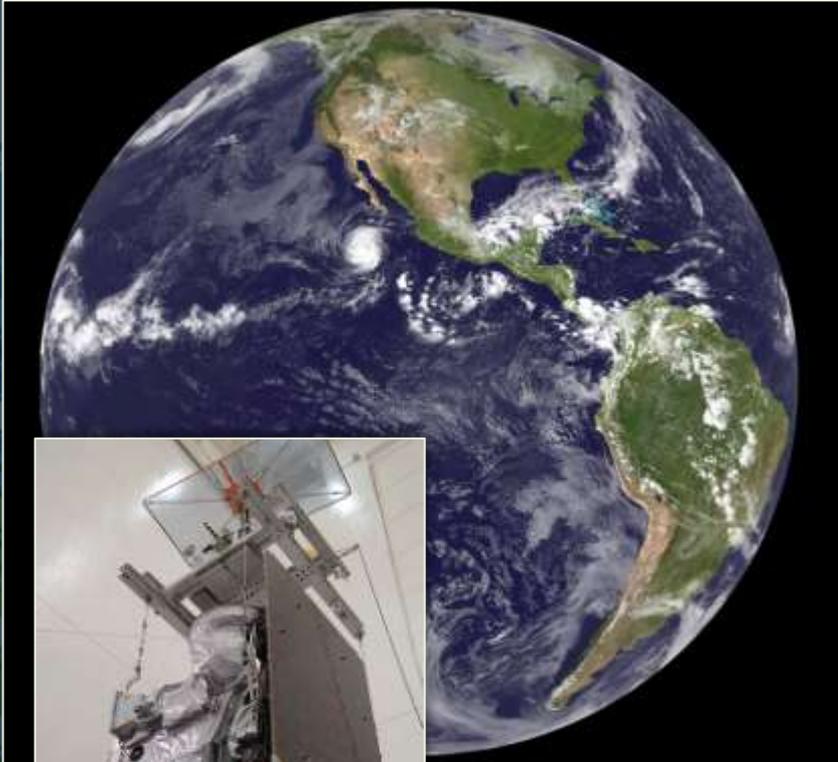
WEATHER & SATELLITES

GoM DISASTER RESPONSE CENTER & CENTER FOR WEATHER & PREDICTION



WEATHER & SATELLITES

GOES 14 & INT'L SPACE WEATHER AGREEMENT



**GOES 14 &
Full Disk Image**



Obama & Cameron highlight space weather partnership (2011/2012)



WEATHER & SATELLITES INNOVATIVE SOCIAL SCIENCE GRANTS

\$879,000 for 4 new NOAA-funded research awards examine weather warnings and social media use

- ☛ Office of Weather & Air Quality with U.S. Weather Research Program and NWS funding
- ☛ University and nonprofit social science and weather researchers to lead
- ☛ NOAA Storm Prediction Center, National Severe Storms Laboratory, NWS offices, and River Forecast Centers will collaborate



CLIMATE

NATIONAL CLIMATE ASSESSMENT & NATIONAL ESTUARINE RESEARCH RESERVE SYSTEM GRANTS

NOAA & University of New Hampshire provide \$4.9M to fund 9 collaborative research projects aimed at making coastal communities and environments more resilient to rising sea levels, changing weather patterns, extreme storms, and ocean warming and acidification

Fund projects in South Carolina, Maryland, Massachusetts, New Hampshire, Maine, Rhode Island, Alabama, Oregon and California



ECOSYSTEMS & FISHERIES

RESTORE ACT & LOPHELIA II PROJECT TEAM



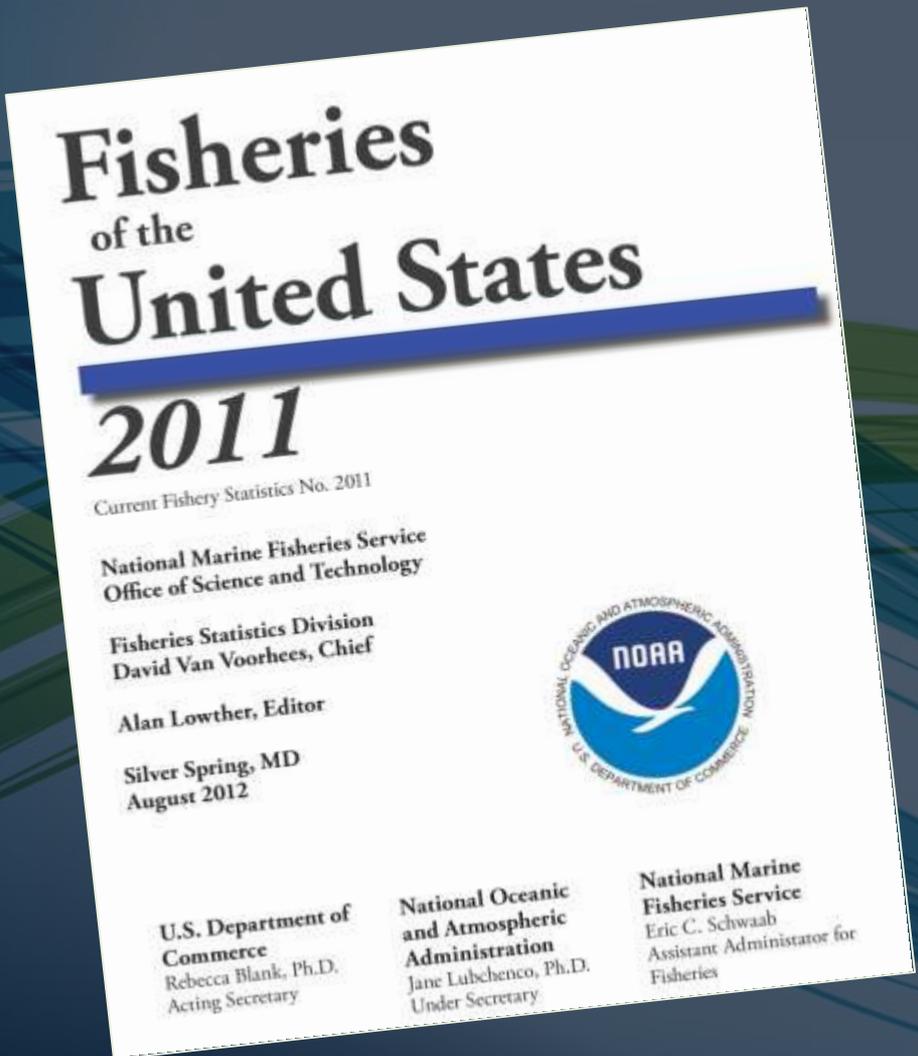
Obama signs RESTORE Act (June 2012)

Lophelia II project team received
National Oceanographic Partnership Program's
2011 Excellence in Partnering Award



ECOSYSTEMS & FISHERIES

FISHERIES OF THE U.S. 2011 & FISHERIES DISASTERS



Northeast
Groundfish



Alaskan
Chinook Salmon



Mississippi's Oyster &
Blue Crab Fisheries

ECOSYSTEMS & FISHERIES

RESEARCH GRANTS: FISHERIES & OCEAN ACIDIFICATION

~1.6M over 3 years to

- ✔ WHOI: ocean scallops
- ✔ SUNY Stony Brook: bay scallops and hard clams
- ✔ University of Washington: model economic impacts based on climate models

Goal to incorporate ocean acidification effects into providing guidance to regional fishery management councils



Hard clams



Atlantic scallops